THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.

Paper No. 22

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte PETER M. PERTHOU

Appeal No. 1998-1946
Application No. 08/629,991[1]

HEARD: April 5, 2000

Before MCCANDLISH, Senior Administrative Patent Judge, NASE and GONZALES, Administrative Patent Judges.

MCCANDLISH, Senior Administrative Patent Judge.

DECISION ON APPEAL

---

[1]In the division-continuation application transmittal form filed April 8, 1996, appellant requested an amendment to the specification to identify appellant's parent application. It does not appear that this amendment was entered.

This is a decision on an appeal from the examiner's final rejection of claims 13 and 15 through 18.[2] No other claims are pending in the application.

Appellant's invention relates to a method for producing a flying toy. According to claim 13, the only independent claim on appeal, the toy is cut from "a thin planar sheet of relatively rigid plastic . . . along planes substantially perpendicular to the plane of the sheet"[3] to provide the toy with "a plurality of equiangularly spaced arms extending from a central hub." Claim 13 additionally recites that the toy is "devoid of any airfoil shaped surface."

---

[2]Claim 14 was amended after the final rejection. See the amendatory paper filed May 9, 1997.

[3]Appellant's specification contains guidelines or standards for determining the scope of the various terms of degree recited in claim 13, namely the words "thin," "relatively" and "substantially." For instance, numerical examples are disclosed for measuring the scope of the term "thin," and an example of a plastic material is disclosed for ascertaining the scope of the term "relatively" in the phrase "relatively rigid." Thus, appellant's specification appears to provide the standards required in Seattle Box Co. v. Industrial Crating & Packing Inc., 731 F.2d 818, 826, 221 USPQ 568, 574 (Fed. Cir. 1984).

A copy of the appealed claims is appended to appellant's brief.

The following references are relied upon by the examiner as evidence of obviousness in support of his rejections under 35 U.S.C. § 103:

Gleason	2,816,764	Dec. 17, 1957
Block et al. (Block)	3,881,729	May 6, 1975
Walker	4,335,537	Jun. 22, 1982

Claims 13, 16 and 17 stand rejected under 35 U.S.C. § 103 as being unpatentable over Block in view of Gleason, and claims 15 and 18 stand rejected under 35 U.S.C. § 103 as being unpatentable over Block in view of Gleason and Walker. Reference is made to the examiner's answer for details of these rejections.

With regard to the rejection of claim 13, appellant does not appear to take issue with the examiner's analysis of the Block and Gleason references as set forth on pages 3 and 4 of the answer. Instead, appellant's main argument supporting patentability of claim 13 is that the prior art lacks a suggestion for combining the applied references in the manner proposed by the examiner.

We have carefully considered appellant's arguments supporting patentability of claim 13 over the combined teachings of Block and Gleason. However, we are not persuaded that this rejection is improper.

The Block patent discloses a unitary flying toy (see Figures 1-3 of Block's drawings) which, like appellant's claimed toy, comprises a plurality of equiangularly spaced arms 21-24 extending radially from a central hub 32. Block's specification states that the flying toy is "suitably cut and formed from 80 mil polyethylene sheet material" (column 4, lines 22-23). According to the examiner's findings (see pages 3 and 4 of the answer), Block's plastic sheet material is thin and is also relatively rigid in the sense that the material must be sufficiently rigid to make the toy work. Thus, the step of providing a thin planar sheet of relatively rigid plastic as defined in clause A of claim 13 is met by Block. Appellant does not argue otherwise.

With regard to clause B of claim 13, the length of each of Block's arms 21-24 is roughly three times greater than the width thereof (see column 4, lines 4-5 of the Block specification), thus making the length of each arm

substantially greater than the width thereof. Appellant does not argue otherwise.

With further regard to clause B of claim 13, appellant seems to concede that Block discloses the concept of cutting the flying toy from a sheet of plastic. He is understood to argue, however, that Block does not teach that the cutting step takes place along planes substantially perpendicular to the plane of the sheet as recited in clause B of claim 13. Appellant is also understood to argue that one of the side edges of each arm in Block's toy is beveled and therefore does not extend perpendicular to the plane of the sheet.

Admittedly, Block does not explicitly describe the specific orientation of cuts made by the cutting step disclosed in column 4, lines 22-23 of the patentee's specification. However, as generally noted by the examiner on page 5 of the answer, it is well known in the art to cut a plastic sheet in order to produce a plastic article and it also is well known in the art to make the cuts along planes perpendicular to the plane of the sheet to simplify the cutting operation. Appellant does not challenge these determinations.

In evaluating an applied reference, such as the Block patent, it is proper to take into account not only the specific teachings of the reference, but also the reasonable inferences that one of ordinary skill in the art would reasonably have been expected to draw from the teachings of that reference. In re Preda, 401 F.2d 825, 826, 159 USPQ 342, 344 (CCPA 1968).

Given the configuration of Block's toy and Block's express teaching of cutting the flying toy from a plastic sheet, the reasonable inference that one of ordinary skill in the art would reasonably have been expected to draw from patentee's teachings is that the sheet is initially cut along planes perpendicular to the plane of the plastic sheet to form the arms and hub of the toy. Id. In any case, it would have been obvious to cut Block's toy from the plastic sheet along planes perpendicular to the plane of the sheet to simplify the cutting operation according to the examiner's unchallenged finding on page 5 of the answer.

Furthermore, Block implicitly recognizes that it was known in the prior art (as in Gleason) to form the arms of the toy without the illustrated bevels 25 and hence with both side

edges of each arm extending perpendicular to the plane of the toy or sheet from which the toy is cut. This implicit recognition arises from Block's teaching in column 3, lines 53-55 that the patentee's beveled side edges 25 "provide a smoother non-fluttering flight" ostensibly in comparison to a corresponding toy without the beveled side edges.

Moreover, the inclusion of the bevels 25 in Block's flying toy does not constitute a distinction over the method defined in appealed claim 13. This claim is open-ended in that it is recited to comprise the steps of clauses A and B, leaving the claim open to additional steps such as beveling. Furthermore, the cutting step of clause B is not drafted in such a way to exclude a further step of beveling one of the side edges of each arm. In any event, it is well-established patent law that the elimination of an element such as Block's bevels 25 together with their associated function (smoother flight) would have been an obvious expedient. See In re Kuhle, 526 F.2d 553, 555, 188 USPQ 7, 9 (CCPA 1975).

In addition, the obviousness of eliminating the bevels 25 in Block's flying toy is recognized in Gleason. Similar to Block's flying toy, Gleason's flying toy comprises a plurality

of equiangularly spaced arms 2 radially extending from a central hub. In Gleason's flying toy, however, both side edges of each of the arms are perpendicular to the plane containing the entire body of the toy except for the bent tips 5. This teaching would have implicitly suggested to one of ordinary skill in the art the concept of providing Block's arms 21-24 with side edges extending perpendicularly to the plane of the toy for the self-evident purpose of eliminating the manufacturing cost of forming the bevels on Block's arms. Admittedly, this suggestion to modify Block is not expressly stated in Gleason. However, the suggestion to modify the prior art need not be expressly articulated in one or all of the references. See In re Sernaker, 702 F.2d 989, 995, 217 USPQ 1, 6 (Fed. Cir. 1983).

Appellant's argument in the second full paragraph on page 6 of the brief seems to suggest that the claimed cutting step somehow is not met by Block because Block states in column 4, lines 22-23, that the toy is "cut and formed" from the plastic sheet. We disagree. With respect to the embodiment shown in Figures 1-3 of Block's drawings, the mention of "forming"

obviously refers to the formation of the bent tips 26-29 after the toy is cut from the plastic sheet.

Furthermore, claim 13 does not distinguish from Block by reciting that the cutting step maintains the flying toy "in a single plane." In the first place, this limitation does not require the toy to lie in a single plane after manufacture of the toy is completed. As noted supra, claim 13 does not exclude additional manufacturing steps that may place portions, such as tips 26-29 or center post 30 in Block's illustrated embodiment, out of the plane of the body of the toy.

In any case, as noted on page 3 of the answer, the examiner does not rely on Block's illustrated embodiment in which the tips of the arms are bent out of the plane of the toy's body. Instead, the examiner expressly relies on the embodiment in which the tips 26-29 of the arms 21-24 are not turned and thus extend as "straight continuations of the arms" as described in column 3, lines 16-21, of Block's specification. As a result, the toy resulting from the cutting step will be maintained in a single plane as recited in claim 13.

Block's teaching of not bending the tips of the arms as discussed supra cannot be ignored. Instead, a determination under 35 U.S.C. § 103 requires consideration of the entirety of the disclosure made by the reference. See In re Rinehart, 531 F.2d 1048, 1051, 189 USPQ 143, 146 (CCPA 1976). As noted in column 3, lines 16-21, of Block's specification, the toy will still fly even though the tips of the arms are not bent and thus remain in the plane of the remainder of the arms.

In Block's flying toy as shown in Figures 1-3, the center post 30 admittedly extends out of the plane containing the hub and arms of the toy. However, as noted supra, claim 13 does not exclude the step of adding the post to the planar body that is cut from the plastic sheet. In any event, the elimination of the post and its associated function set forth in column 4, lines 25-26, would have been an obvious expedient. See In re Kuhle, 526 F.2d at 555, 188 USPQ at 9. Like the elimination of the bevels 25, the elimination of Block's post 30 would not render the toy inoperative.

Finally, the arms and hub of Block's flying toy are flat sided and thus lack an airfoil shaped surface in the sense

that the term “airfoil” is used in appellant’s specification. Consistent with appellant’s specification (see page 9, lines 23-24, page 14, line 17 and page 15, lines 22-23) an airfoil surface is interpreted to be one that provides lift.

In view of the foregoing, we are satisfied that the subject matter of claim 13 would have been obvious to one of ordinary skill in the art from the collective teachings of the applied references under the test set forth in In re Keller, 642 F.2d 413, 425, 208 USPQ 871, 881 (CCPA 1981). Accordingly, we will sustain the rejection of claim 13 and also the rejection of dependent claims 16 and 17 which stand or fall with claim 13 (see page 3 of the main brief and page 1 of the reply brief).

However, we will not sustain the rejection of claims 15 and 18. Both of these claims recite the step of forming visible indicia on a translucent plastic (namely polyvinyl chloride) to produce an optically perceived pattern. The Walker patent is silent as to the nature of the features on the wings 28. However, even if it is assumed for the sake of argument that these features constitute indicia, there is no suggestion in Walker or any of the other applied references of

applying such indicia to arms made of translucent plastic so as to produce an optically perceived pattern upon spinning the arms during flight of the toy.

The examiner's decision rejecting the appealed claims is affirmed with respect to claims 13, 16 and 17, but is reversed with respect to claims 15 and 18.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a).

AFFIRMED-IN-PART

Harrison E. McCandlish, Senior Administrative Patent Judge	)	
Jeffrey V. Nase Administrative Patent Judge	)	BOARD OF PATENT APPEALS AND INTERFERENCES
John F. Gonzales Administrative Patent Judge	)	

tdl
FISH & RICHARDSON
225 Franklin St.
Boston, MA 02110-2804